REMARKS

Claims 1-3, 5-10 and 13-22 are in this application and are presented for consideration. By this amendment, Applicant has amended claims 1, 8, 9, 14, 15 and 16. Claims 4, 11 and 12 have been canceled.

The drawings have been objected to under 37 CFR 1.83(a) because the Office Action states that the locking means of claim 12 and the holding means of claim 11 are not shown in the drawings.

Applicant has canceled claims 11 and 12.

The specification has been objected to because the Office Action states that the incorporation of essential material in the specification by reference to an unpublished foreign application or patent is improper.

Applicant respectfully disagrees with this objection. The PCT application has been published as WO 2005/077788 A1. Accordingly, Applicant respectfully requests that the Examiner remove the objection as the incorporation by reference is proper.

The disclosure has been objected to because of minor informalities because the Office Action states that paragraphs 5 and 9 do not make sense.

Applicant has amended paragraph [0005] of the specification as shown above. Paragraph [0009] has not been amended as it is Applicant's position that paragraph [0009] is clear. Accordingly, Applicant respectfully requests that the Examiner remove the objection to the specification.

The abstract of the disclosure has been objected to because the abstract is too long.

Applicant has amended the abstract as shown above to shorten the length of the abstract.

Claim 12 has been rejected under 35 U.S.C. 112, first paragraph, because the Office Action states that there is no disclosure detailing the locking means. Claim 11 has been rejected under 35 U.S.C. 112, first paragraph, because the Office Action states that there is no disclosure detailing the locking means.

Applicant has canceled claims 11 and 12.

Claims 1-21 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended the claims paying close attention to the Examiner's remarks. It is Applicant's position that the claims as now presented are clear and fully comply with the requirements of the statute. Accordingly, Applicant respectfully requests that the Examiner remove the rejection in light of the changes to the claims.

Claims 1-7, 9-11, 13-18, 20 and 21 have been rejected under 35 U.S.C. 102(a) as being anticipated Plutt et al. (U.S. 6,639,879 B2).

The claims have been amended to highlight that a vertical elevator transfers at least one storage and retrieval unit from one independent shelf unit of one shelf to another independent shelf unit of another shelf or the same shelf. According to the present invention, the one or more storage and retrieval units are longitudinally adjustable so that the storage and retrieval unit can move up and down to reach various shelf levels within an independent shelf unit. The

vertical elevator allows fewer storage and retrieval units to be used since a storage and retrieval unit does not have to provided for every shelf since the storage and retrieval units are able to move from one shelf to another via the vertical elevator. This advantageously saves manufacturing costs since less storage and retrieval units are necessary. Further, the overall height of the shelves can be drastically increased because the overall dynamic and static forces are minimized due to the lower amount of storage and retrieval units. The prior art as a whole fails to teach or suggest such features or such manufacturing costs minimization advantages.

Plutt et al. discloses in one embodiment an automated library system 100 and contains the multiple independent robots 102 to enable the library system 100 to concurrently manipulate multiple media cartridges 105. The library system 100 comprises a two-dimensional array of media cartridge storage cells 103 and media cartridge players 104 that are mounted in a frame 101. The system of rails 121-126 is used to guide robotic pods 102 through all of the locations in the array, which eliminates the need for any steering or guide mechanisms on board the robotic pods 102, resulting in a reduction in the mass of the robotic pods 102. The frame 101 is designed to receive a plurality of rows 151-154 of media cartridge storage cells cartridge 103. A plurality of vertical elevator assemblies 131-133 are provided that enable the transfer of the robotic pods 102 in the vertical direction. In other embodiments, Plutt et al. discloses an elevator robot mechanism 200, 300, 400 that allows a single picker to retrieve cartridges from storage cells on multiple rows at a time.

Plutt et al. fails to teach and fails to suggest the combination of a vertical elevator that vertically transfers at least one storage and retrieval unit from one independent shelf unit to

another independent unit wherein at least one of the storage and retrieval units is operated at one of the independent shelf units that comprises a plurality of shelf levels as claimed. Plutt et al. merely discloses a plurality of vertical elevator assemblies 131-133 that move robotic pods 102 from one row of media cartridge storage cells 103. However, Plutt et al. does not teach or suggest in the one embodiment that the robotic pods 102 operate at at least one independent shelf unit that has a plurality of shelf levels. Although Plutt et al. discloses an elevator robot mechanism 200, 300, 400 that allows a single picker to retrieve cartridges from storage cells on multiple rows at a time in other embodiments, the other embodiments of Plutt et al. do not teach or suggest that the elevator robot mechanisms 200, 300, 400 are used in combination with a vertical elevator as featured in the present invention. Compared with Plutt et al., the present invention includes one or more storage and retrieval units wherein at least one of the storage and retrieval units operates at at least one of the two independent shelf units of a shelf. According to the present invention, a vertical elevator transfers the at least one storage and retrieval unit from one of the independent shelf units to another one of the independent shelf units. This advantageously allows the overall height of the shelves to be increased because the overall dynamic and static forces are minimized since the vertical elevator allows for a lesser amount of storage and retrieval units. Plutt et al. fails to disclose such increased height shelf advantages since Plutt et al. does not disclose an embodiment that includes a vertical elevator and at least one storage unit that operates at at least one independent shelf unit having a plurality of shelf levels. In fact, Plutt et al. does not provide any teaching or suggestion for a conveying means for transporting trays or containers that are

to be introduced as claimed. As such, the prior art as a whole takes a completely different approach and fails to teach or suggest important features of the claimed combination. Accordingly, Applicant respectfully requests that the Examiner favorably consider claims 1 and 9 as now presented and all claims that respectively depend thereon.

Claims 1, 8 and 9 have been rejected under 35 U.S.C. 102(b) as being anticipated by Schröder (U.S. 5,096,355).

Schröder discloses a high bay racking store for storing and for removing from storage paper rolls. The high bay racking store 10 is provided with a plurality of shelf compartments disposed in rows above each other and in side-by-side arrangement, to which the individual paper rolls are supplied by means of relocation cars 50 and a paper roll trolley 70 mounted on the relocation cars and traveling transversely to the longitudinal direction of the relocation car, in which the paper roll trolley 70 is moved with the paper roll in a raised position into the shelf compartment between paper roll supports 80 extending in the longitudinal direction of the shelf, the paper roll being subsequently deposited on the support. The supply of the relocation cars 50 with the paper trolley 70 is effected with the aid of conveying tracks 40-43 allocated to the individual shelf compartment tiers and by means of at least one elevator 60, the elevator well 60' of which is disposed stationarily or displaceably in the distribution well 30 formed between the two shelf portions of the high bay racking store 10 which are located opposite each other.

Schröder fails to provide any teaching or suggestion for the combination of one or more shelves wherein each of the shelves comprise at least two independent shelf units with each

independent shelf unit comprising a plurality of shelf levels. Schröder merely discloses individual shelf compartment tiers that are arranged side by side with each shelf compartment being located adjacent to one of the conveying tracks 40-43. However, the shelf compartments do not have a plurality of individual shelf levels as claimed. Compared with Schröder, at least one storage and retrieval unit operates at at least one independent shelf unit of a shelf. According to the present invention, each shelf comprises at least two independent shelf units with each independent shelf unit comprising a plurality of shelf levels. This is a completely different approach from Schröder. Schröder only discloses a paper roll trolley 70 that is mounted on the relocation cars 50. According to Schröder, the paper roll trolley 70 moves in a transverse direction to pick up a paper roll that is disposed in a shelf compartment, but the shelf compartment does not have a plurality of shelf levels as claimed. This disadvantageously increases the overall cost of the racking store since the paper roll trolley 70 cannot move in a longitudinal direction between various shelf levels as claimed. As such, the prior art as whole does not teach or suggest each and every feature of the claimed combination. Accordingly, Applicant respectfully requests that the Examiner favorably consider claims 1 and 9 as now presented and all claims that respectively depend thereon.

Claim 19 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Plutt et al., and further in view of Nakashima et al. (U.S. 6,443,264). Although Nakashima et al. teaches a stacker crane, the references as a whole fail to suggest the combination of features claimed. Specifically, Plutt et al. and Nakashima et al. provide no suggestion or teaching for the combination of a vertical elevator that vertically transfers at least one storage and retrieval

unit from one independent shelf unit to another independent shelf unit wherein the at least one storage and retrieval unit operates at at least one independent shelf unit that has a plurality of shelf levels. As such, the references together do not teach or suggest the combination of features claimed. One of ordinary skill in the art is presented with various concepts, but these concepts do not provide any direction as to combining the features claimed. Accordingly, all claims define over the prior art as a whole.

Applicant has added new independent claim 22. New independent claim 22 further clarifies that the first shelf and the second shelf comprise a pair of horizontal rails and that the elevator cage has a pair of elevator rails that align with the horizontal rails of one of the shelves when at least one of the storage and retrieval units is vertically transferred. The prior art as a whole fails to teach or suggest such features. Accordingly, Applicant respectfully requests that the Examiner favorably consider new independent claim 22.

Favorable consideration on the merits is requested.

Respectfully submitted
for Applicant,

By:_____
John James McGlew
Registration No. 31,903
McGLEW AND TUTTLE, P.C.

- and -

By:_____
Brian M. Duncan
Registration No. 58,505
McGLEW AND TUTTLE, P.C.

JJM:BMD
72272-7

DATED: October 29, 2009
BOX 9227 SCARBOROUGH STATION
SCARBOROUGH, NEW YORK 10510-9227
(914) 941-5600

SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-0410.